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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,223	09/10/2003	Krishnamurthy Bhaskar	58552.US	5755

60838 7590 08/09/2007  
LNG/KLA JOINT CUSTOMER  
C/O LUEDEKA, NEELY & GRAHAM, P.C.  
P.O. BOX 1871  
KNOXVILLE, TN 37901

EXAMINER
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REKSTAD, ERICK J

ART UNIT	PAPER NUMBER
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2621

MAIL DATE	DELIVERY MODE
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08/09/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/659,223	Applicant(s) BHASKAR ET AL.	
	Examiner Erick Rekstad	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 12-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This is a Final Rejection for Application no. 10/659,223 in response to the amendment filed on May 24, 2007.

#### ***Response to Arguments***

Applicant's arguments filed May 24, 2007 have been fully considered but they are not persuasive. The Applicant argues that the combination of US Patent 6,370,487 to Dorough and US Patent 5,926,208 to Noonen et al. does not teach the use of a parser to selectively crop the video stream prior to delivery of the video stream from the sensor to the desktop. The Applicant further argues:

that "zooming" as described in the reference is not the same as "cropping" as claimed in the present application. Zooming sends the same amount of information across the network, because although a smaller portion of the object is imaged, the same number of pixels is concentrated on that smaller portion, thus creating the high resolution sub-image from the low resolution full image. Therefore, zooming does not reduce the bandwidth required on the network. Cropping, by contrast, not only images a smaller portion of the object, but also does not increase the pixel count within that smaller portion. Thus the bandwidth required on the network is reduced, which is a big difference.

The Examiner respectfully disagrees. The Applicant argues the difference between "zooming" and "cropping" based on supposed description in the references and the present applicant. Noonen teaches the user is able to control such camera functions as focus, zoom, exposure, etc (Col 10 Lines 40-46). Noonen is silent on the specific technique used for zooming. The present Application's Specification teaches the use of a parser to perform the "cropping and zooming" function (Paragraphs [0026] and [0029]). Note, the Specification treats cropping and zooming as a single feature

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(Page 12 Lines 10-11 and 23-24). Further, the claims do not require the resulting image to be of a reduced bandwidth.

Noonen specifically teaches the use of a digital camera (Col 13 Lines 17-21) as the video source (1030 in Fig. 2). Thus it would be inherent that the camera use the well known technique in the art for digital zooming (cropping an image). An example of such a digital zooming is provided in US Patent 6,005,613 to Endsley et al. (Col 5 Lines 48-55). Even if one was to assume the use of an optical zoom, the zooming performs the operation of cropping the full image to the desired image by using an adjustment to the lens. Therefore, it is viewed by the examiner that Dorough and Noonan teach the requirements of the claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,370,487 to Dorough in view of US Patent 5,926,208 to Noonan et al.

[claim 1]

As shown in Figure 1A, Dorough teaches a system for inspecting a substrate (100). The system comprises an inspector (108) having a sensor (118, 120), a network

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(111), and a desktop (102A-n) for receiving the video stream (Abstract, Col 1 Lines 12-16), Col 1 Line 64-Col 2 Line 1). Dorough is silent on the use of a control interface.

As shown in Figure 2, Noonan teaches the connection of a camera system (1000) to a computer system(1002) wherein the computer system provides a user an interface(1016) to configure the video camera system(1000) (Abstract). The network (1006) connecting the computer system to the video camera system provides for a control stream (Col 10 Lines 17-27) and a video stream (Col 10 Lines 55-58). The camera system includes a video communication processor (1024). The video communication processor is connected to the video source (Col 7 Lines 23-39, Fig. 3). The video communication processor provides the means for compressing, decimating, parsing, and frame rate selection (Col 8 Lines 23-35, Col 10 Lines 17-28 and 35-44, Figs. 4-7). The parsing value is determined prior to delivery of the video stream from the sensor to the desktop by using an initialization file (Camera.INI 3028, Fig 4) (Col 10 Lines 17-28). The file allows for setting up the focus, zoom (cropping), exposure, light balance, etc for the video source (Col 10 Lines 40-44). It would have been obvious to one of ordinary skill in the art to adapt the inspector of Dorough in order to provide the inspector a means to control the camera so multiple compression standards can be used as taught by Noonan (Col 3 Lines 6-12)

[claims 2-4]

Dorough teaches the use of the system for analyzing semiconductor wafers (Col 1 Lines 11-16, Col 1 Lines 34-40, Col 3 Lines 10-15).

[claim 5]

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As shown in Figure 1A, Dorough teaches the use of multiple video sources (118 and 120).

[claims 6-10, 13 and 14]

Dorough teaches the use of a video capture system (112) for converting the analog video into a digital form (Col 4 Lines 46-49). Dorough further teaches the video capture system includes a video encoder (CODEC) which encodes, or compresses the captured frames (Col 6 Lines 61-65). Dorough teaches the encoding in the ASF or Real Video formats (Col 5 Lines 5-10). Dorough is silent on the use of a parser.

Noonen teaches the ability of the user to select several options for configuring the camera system(Figs. 4-7). Noonen teaches one selection is the codec to use (MPEG-1, H.320, H.324 and JPEG). The codec selection determines the motion estimation, loop filters, DCTs, quantization, and zigzag scanning operations used by the system (Col 8 Lines 23-35). The user's selection further includes a configuration file (MEP.CFG 3026, Fig. 4) which allows the user to configure the bit rate to compress, how much compression and how much information to throw away, and which colors to affect (Col 10 Lines 35-40). The user is further provided an initialization file (Camera.INI 3028, Fig 4) for setting up the focus, zoom, exposure, light balance, etc for the video source (Col 10 Lines 40-44). In regards to claim 6, the above configuration files are provided prior to delivery of the video stream from the sensor to the desktop (Col 10 Lines 17-28).

Note, the selection of the codec affects the degree of compression as required by claims 7 and 8(Col 8 Lines 23-35), the down sampling of the video stream as required

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by claims 9 and 10(Col 10 Lines 35-40), and frame rate as required by claims 13 and 14(Col 11 Lines 4-9). The Camera.INI file allows the selection of cropping the video (zoom) at a variable degree as required by claim 12(Col 10 Lines 40-46).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the configurable camera system of Noonen with the inspection system of Dorough in order to provided the user the ability to configure the compression based on the needs of the user and the environment as taught by Noonen (Col 2 Lines 30-54, Col 10 Lines 41-43).

[claim 15]

As shown above for claim 1, Figure 1A of Dorough teaches a system for inspecting a substrate (100). The system comprises an inspector (108) having a sensor (118, 120), a network (111), and a desktop (102A-n) for receiving the video stream (Abstract, Col 1 Lines 12-16), Col 1 Line 64-Col 2 Line 1). Dorough is silent on the use of a control interface.

Figure 2 of Noonen teaches the connection of a camera system (1000) to a computer system(1002) wherein the computer system provides a user an interface(1016) to configure the video camera system(1000) (Abstract). The network (1006) connecting the computer system to the video camera system provides for a control stream (Col 10 Lines 17-27) and a video stream (Col 10 Lines 55-58).

As shown above for claims 7-14, Noonen teaches the use of a video communication processor (MEP 1024, Fig. 2) connected to the video source (Col 7 Lines 23-39, Fig. 3). The video communication processor provides the means for

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compressing, decimating, parsing, and frame rate selection (Col 8 Lines 23-35, Col 10 Lines 17-28 and 35-44, Figs. 4-7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the configurable camera system of Noonen with the inspection system of Dorough in order to provided the user the ability to configure the compression based on the needs of the user and the environment as taught by Noonen (Col 2 Lines 30-54, Col 10 Lines 41-43).

[claims 16-17]

Dorough teaches the use of the system for analyzing semiconductor wafers (Col 1 Lines 11-16, Col 1 Lines 34-40, Col 3 Lines 10-15).

[claim 19]

Dorough teaches the use of an additional video stream source (SEM 2, Fig. 1A).

[claim 20]

Dorough and Noonen teach the system of claim 15 as shown above. The rejection of claim 15 further teaches the compressing, decimating, parsing and frame rate selection is performed by the MEP ((Col 8 Lines 23-35, Col 10 Lines 17-28 and 35-44, Figs. 4-7). The MEP of Noonen is further shown to reside within the inspector(1000, Fig. 2) (Col 5 Lines 29-35, Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the configurable camera system of Noonen with the inspection system of Dorough in order to provided the user the ability to configure the compression



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based on the needs of the user and the environment as taught by Noonen (Col 2 Lines 30-54, Col 10 Lines 41-43).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dorough and Noonen as applied to claim 15 above, and further in view of US Patent 6,721,952 to Guedalia et al.

[claim 18]

As shown above for claim 15, Dorough and Noonen teach an inspecting system. Noonen further teaches the ability of the user to select different settings for the encoding of the video source (Col 8 Lines 23-35, Col 10 Lines 17-28 and 35-44, Figs. 4-7). Dorough and Noonen are silent on the connection between zooming and image quality.

Guedalia teaches the ideal use of a zooming function by the user is to obtain a sub-image with higher resolution (Col 1 Lines 66-Col 2 Lines 15). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the gazing feature of Guedalia with the system of Dorough and Noonen in order to provide a user with the ability to zoom in on a low resolution full image to obtain high resolution sub-images as taught by Guedalia.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6,005,613 to Endsley et al.

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**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 571-272-7338. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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